

GAO

Report to Congressional Requesters

November 1988

ARMY FORCE
STRUCTURE
Current System for
Assigning Troops to
Europe Has
Advantages Over
Alternatives





United States
General Accounting Office
Washington, D.C. 20548

**National Security and
International Affairs Division**

B-248861

November 10, 1993

The Honorable Dave McCurdy
Chairman, Subcommittee on Military
Installations and Facilities
Committee on Armed Services
House of Representatives

The Honorable Patricia Schroeder
House of Representatives

This report responds to your request that we review the possibility of the Army rotating unaccompanied forces to Europe to replace the forces stationed there permanently.

Unless you publicly announce its contents earlier, we plan no further distribution of this report for 7 days. At that time, we will send copies to the Chairmen of the House and Senate Committees on Armed Services and on Appropriations and the Secretaries of Defense and the Army.

Please contact me at (202)512-3504 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix II.

A handwritten signature in cursive script that reads "Richard Davis".

Richard Davis
Director, National Security
Analysis

Executive Summary

Purpose

Congress appropriated more than \$2.2 billion to the Army in fiscal year 1991 to operate dependent-related facilities overseas. In light of Congress' continuing interest in reducing the cost of retaining forces in Europe, the Subcommittee on Military Installations and Facilities, House Committee on Armed Services, asked GAO to assess the feasibility of rotating Army personnel to Europe without their dependents as a means of reducing the costs of operating facilities.

This report analyzes the relative merits of four alternative force rotation systems. The alternatives were (1) adopting the system used in Korea of rotating individuals without their dependents, (2) introducing a unit rotation system without dependents, (3) rotating units without dependents for short-term training tours, and (4) continuing the current system of rotating individuals with their dependents. GAO evaluated these alternatives on the basis of cost, readiness, morale, and force structure constraints—the key factors that the Army cited for canceling past force rotation programs.

Background

For several years, some Members of Congress have encouraged the Army to change its current system of rotating military personnel to Europe with their dependents. These accompanied tours of duty typically last 3 years. Congressional interest in unaccompanied force rotations stems from the belief that the Army could significantly cut the costs of operating dependent-related facilities, such as family housing, schools, commissaries, and recreational facilities.

The Army, however, has consistently rejected changes to its system on grounds that (1) it does not have sufficient numbers of like units to sustain unit rotations on a permanent basis, (2) shorter unaccompanied rotations would cost more than the current system, and (3) morale and readiness would be adversely affected by family separations and the more frequent personnel turnover. The Army based its conclusions on its past experience with rotation programs and its own cost comparisons of various assignment policies.

By 1995, the Army expects to reduce its personnel in Europe to about 60,000. GAO estimates that about 27,000 of these personnel would serve with their dependents, assuming a continuation of current trends under the current assignment policy.

Results in Brief

On the basis of its analysis, GAO does not believe there are strong arguments for departing from the current Army system for assigning personnel to Europe. Although each of the alternatives GAO considered could be used to fill at least some Army positions in Europe, each has drawbacks that limit the extent to which it could be implemented or pose significant logistical problems. Moreover, while too many variables exist to accurately compare the alternatives from the standpoint of cost, two key factors, transportation cost for dependent moves within the United States and offsetting costs in the United States, suggest that the alternatives may not provide a cost savings over the current system. When all key factors are considered, the current system offers many advantages over the alternatives GAO considered. Moreover, given ongoing efforts to consolidate operations and improve efficiency, substantial cost savings should accrue even without a change in the current system.

GAO Analysis

Replicating System in Korea Is Possible, but Offsetting Costs Would Reduce Savings

Instituting an unaccompanied, individual replacement rotation system similar to the one used in Korea would permit the Army to close some dependent-related facilities, such as day care centers, family housing, and schools, because most assignments would be on an unaccompanied basis. The Army might also be able to reduce the size of some facilities used both by military personnel and their dependents, such as commissaries, base exchanges, and recreational facilities. The extent that facilities could be closed or reduced would depend on (1) the number and location of Army accompanied tour assignments that would be required for force continuity and (2) the location of other U.S. military and government employees and their dependents using the facilities.

The amount of compensation the United States may receive resulting from closing facilities depends primarily on the outcome of bilateral negotiations with host countries on the value of facilities turned over to them. Over the course of the drawdown in Europe, these negotiations have not yielded substantial proceeds to the United States. Furthermore, some cost savings resulting from replicating the Korean system would be offset by cost increases in other areas. In particular, transportation costs would rise significantly because travel regulations permit dependents to move their household goods to a U.S. location of their choice when the soldier serves overseas on an unaccompanied tour. Shifting to 1-year

unaccompanied assignments, therefore, could result in up to three times as many moves during a 3-year period when compared with the current policy.

The Army believes that shorter unaccompanied rotations in Europe would take a toll on readiness because of higher personnel turnover and would hurt morale because of the separation of families. Minimizing these concerns would require more intensive planning and better execution than was the case in past rotation programs. The Army's experiences with its rotation program in Korea could be instructive in instituting a similar but improved system in Europe.

Unit Rotations Could Only Be Instituted on a Limited Scale

Rotating personnel with their units but without their dependents is thought to offer the advantages of increased unit cohesion and effectiveness among unit personnel, as well as increased support for dependents back in the United States. While past unit rotation programs were canceled due to the problems they encountered, better planning and implementation of these programs might have improved their chances for success.

If a unit rotation system is instituted, certain types of units would probably have to be excluded because the Army's active component force structure does not contain sufficient numbers of like units to sustain the rotations on a continuous basis. For example, some types of combat support and combat service support units are primarily in the reserves and could not be deployed for extended periods of time. Rotating such units on an intermittent basis for short periods of time would be possible but poses logistical problems.

Unit rotations do not offer major cost or readiness advantages over the individual replacement rotations used in Korea. The cost of moving personnel without their families remains the same whether personnel are moved as individuals or as part of units. However, if units brought their equipment with them, transportation costs would significantly increase. Army officials believe that the ensuing logistical difficulties, coupled with the shorter duration of the unaccompanied tours, might significantly reduce the productive time available in Europe and adversely affect readiness.

Intermittent Training
Rotations Present
Logistical Difficulties

Rotating units to Europe for short-term training tours—lasting less than 6 months—would offer these units the opportunity to conduct maneuver exercises at major training areas in Germany. These rotations would also provide an intermittent presence that might compensate somewhat for reduced forward stationing of troops.

Such rotations, however, are costly and would present considerable logistical difficulties. For example, past Department of Defense comparisons have shown 6-month unit rotations to be more costly than the current system. Moreover, facility and equipment storage constraints could hamper the Army's ability to rotate combat units to the major training areas. The need to continually move equipment back and forth from remote prepositioned equipment sites drives up costs and poses logistical difficulties that make this an impractical alternative. Too many different types of equipment would need to be stored to rotate combat service support units from the United States, unless this was done on a very selective basis. One alternative appears to be to rotate selected combat units—perhaps at the battalion or company level—into the place of units rotating out of Europe. The replacement units would use the existing equipment and transport it to the major training areas.

Current System Offers
Advantages If Savings
From Consolidating
Operations Continue

When all key factors are considered, the current assignment system offers many advantages over the other three alternatives from the standpoint of readiness and morale. Moreover, assuming that consolidations and improved efficiency of operations continue, substantial savings could occur even without a change in the current system.

From the standpoint of readiness, the current 3-year tours offer soldiers what Army officials believe is one of the Army's best training programs. In their opinion, this program is successful because it systematically builds from an established sequence of training at local training exercises to an annual collective training exercise at the major training areas. While this continuity might be preserved under a unit rotation program, it would require careful planning of the stateside training and equipment of units designated to participate in the overseas rotations in order to match that of like units in Europe.

The current assignment policy appears to offer advantages over the alternatives from the standpoint of morale because families remain together. Making unaccompanied assignments in Europe voluntary would perhaps take less of a toll on morale but might change the complexion of

the force if larger numbers of single soldiers are attracted. These impacts are difficult to predict.

Although advocates of unaccompanied force rotations have seen cost savings as their major benefit, GAO's analysis suggests that the cost savings may be minimal. While too many variables exist to precisely compare the cost differences of the alternatives, two key factors—the lower transportation costs and the lower-than-expected recoupments of closed facilities turned over to host countries—favor a continuation of the current system. By continuing to centralize Army operations, close and consolidate facilities, and improve the efficiency of current operations, the Army should be able to achieve considerable cost savings in Europe without a major change in the assignment policy.

Recommendations

GAO believes that this report should enhance Congress' understanding of the factors that should be taken into account in considering alternative rotation programs, but it is not making any recommendations.

Agency Comments

The Department of Defense fully concurred with the contents of this report.

Contents

<hr/> Executive Summary <hr/>		2
Chapter 1 Introduction	Army Presence in Europe to Be Reduced by Two-Thirds	10
	Assignment Policies in Europe and Korea Differ	12
	Army Has Attempted Various Rotation Programs	14
	DOD Studies of Rotation Programs Have Had Shortcomings	15
	Objectives, Scope, and Methodology	16
<hr/> Chapter 2 Replicating Program in Korea Is Possible but Has Disadvantages <hr/>	Most Personnel in Korea Serve Without Their Dependents	19
	Other Costs Would at Least Partly Offset Savings on Facilities	20
	Residual Value of Released Facilities May Result in Additional Monetary Return	27
	U.S. Officials Envision Other Risks and Costs Related to Unaccompanied Assignments	27
	Lessons Can Be Learned From Experiences in Korea	29
<hr/> Chapter 3 Other Alternatives Do Not Offer Clear Advantages Over Current System <hr/>	Unit Rotations Possible, but Past Problems Must Be Overcome	32
	Short-Term Rotations Problematic, but Could Provide Presence as Troops Are Reduced	37
	Current System Offers Advantages	40
<hr/> Chapter 4 Conclusions <hr/>		46
	Option 1: Increase Assignments Without Dependents as in Korea	46
	Option 2: Rotate Entire Units	48
	Option 3: Institute Short-Term Intermittent Training Rotations	48
	Option 4: Retain the Current System of Accompanied Assignments	49
<hr/> Appendixes <hr/>	Appendix I: Summaries of Past Army Rotation Programs	52
	Appendix II: Major Contributors to This Report	56
<hr/> Tables <hr/>	Table 1.1: Profile of Past Major Army Unit Rotation Programs	15
	Table 2.1: Army Personnel Serving in Korea and Europe With and Without Their Dependents	19

Contents

Table 2.2: Indications of Cost Increases and Decreases Associated with an Expansion of Unaccompanied Assignments in Europe	21
Table 2.3: Illustrative Moves Associated with One 3-Year Accompanied Assignment in Europe Compared to Three 1-Year Unaccompanied Assignments	22
Table 2.4: Status of Family Housing in Europe by Type, Fiscal Years 1990 and 1995	23
Table 3.1: Extent to Which Army's Force Structure Could Sustain Rotations of Combat Units With and Without Using Contingency Forces	36
Table 3.2: Army Plans for Facility Reductions in Europe	43

Figures	Figure 1.1: Progression of U.S. Military Drawdown in Europe, September 1990 through September 1996	11
	Figure 1.2: U.S. Army Forces Deployed Overseas	12

Abbreviations

COHORT	Cohesion, Operational Readiness, and Training
DOD	Department of Defense
EUCOM	U.S. European Command
NATO	North Atlantic Treaty Organization
SOFA	Status of Forces Agreement
USAREUR	U.S. Army, Europe

Introduction

Since the end of World War II, the United States has maintained troops in Europe to deter and defend against the Soviet and Warsaw Pact threat. With the collapse of the Warsaw Pact and the dissolution of the former Soviet Union, the Department of Defense (DOD) has substantially reduced its forces in Europe. A major portion of these reductions has been in the number of U.S. Army troops. Under current plans, the U.S. Army's presence in Europe will be reduced from about 213,000 in 1990 to a projected level of 60,000 by 1995.

Along with these reductions have come renewed suggestions that a force rotation program similar to the one that is currently used in Korea might be considered for Europe as a means of providing forward presence at less cost.¹ The program in Korea differs from the one currently used in Europe in that most soldiers are assigned for shorter tours without their dependents. Most soldiers in Korea serve 1-year unaccompanied tours because Korea is a potential combat zone; therefore, the number of family members in country has been restricted. Because fewer dependents are present in Korea, fewer dependent-related facilities are required. Congress appropriated more than \$2.2 billion to the Army in fiscal year 1991 to operate dependent-related facilities overseas.

The Army has experimented with various unit and individual replacement rotation programs since the 1950s; however, these programs generally encountered problems that led to their cancellation. Nevertheless, Congress has continued to express interest in rotations and, over the past decade, has mandated various DOD and Army studies aimed at assessing the relative costs of permanent stationing and force rotations. Although these studies have generally shown rotations to be more costly than permanent stationing, most were conducted prior to the major force reductions that have taken place. This report discusses the feasibility of instituting rotation programs in Europe similar to the one currently used in Korea and unit rotations used in the past in light of the changed situation in Europe.

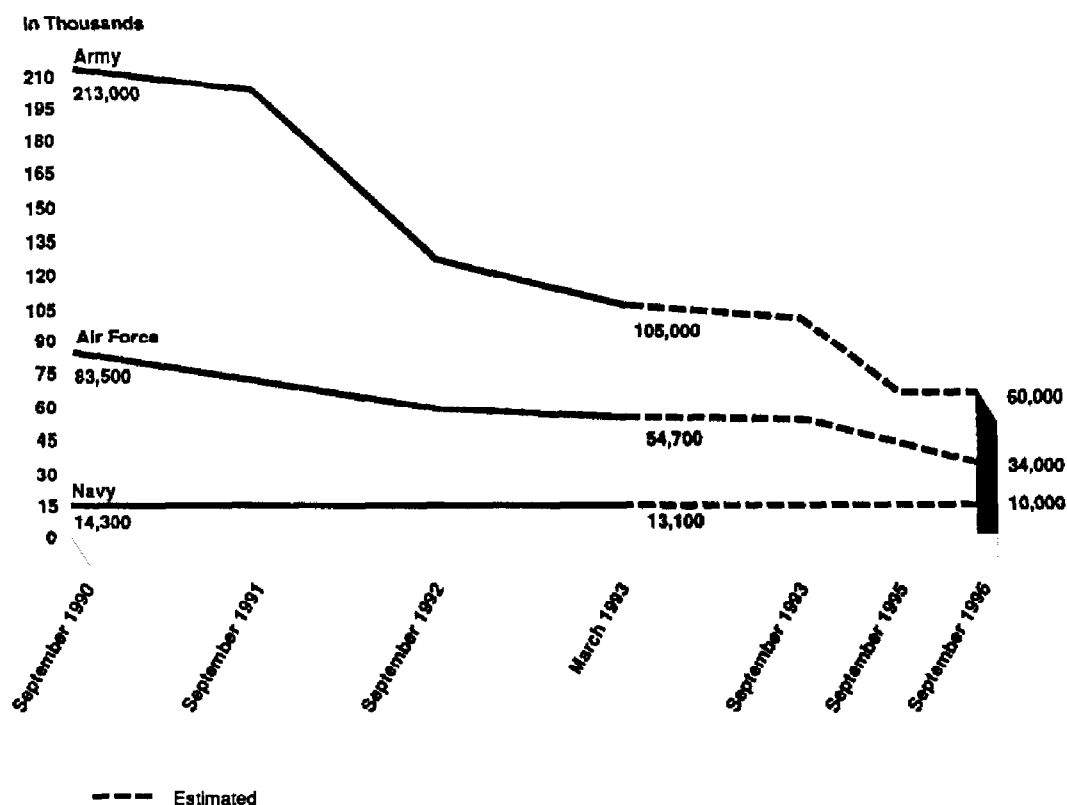
Army Presence in Europe to Be Reduced by Two-Thirds

As shown by figure 1.1, DOD has made substantial reductions in U.S. forces in Europe since 1990, with the Army accounting for the largest proportion of the reductions. As of April 1993, the Army had been reduced to half its size in 1990, and the Air Force had been reduced by about a third. Smaller

¹The terms "force rotation programs" and "personnel assignment policies" are used interchangeably in this report. They refer to the systems the Army uses to assign personnel overseas, either on a unit or on an individual basis.

reductions have taken place in the Navy, which has historically had a much smaller European presence.

Figure 1.1: Progression of U.S. Military Drawdown in Europe, September 1990 Through September 1996 (Projected)

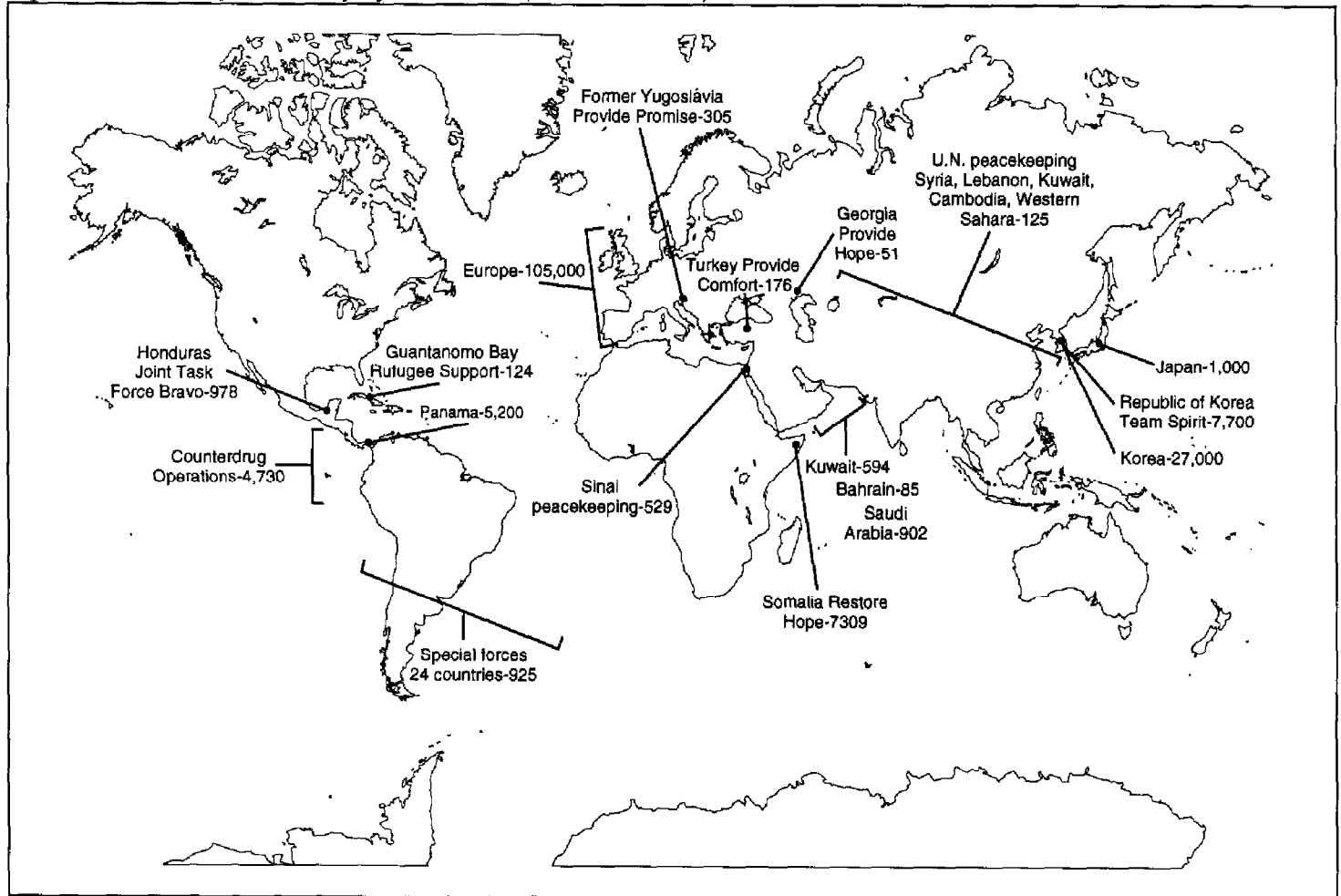


Source: U.S. European Command (EUCOM).

Although the Army has achieved substantial force reductions over the past 3 years, it still had about 138,200 permanently stationed troops in Europe, Korea, Panama, and Japan in March 1993. As shown by figure 1.2, the Army had another 26,000 soldiers temporarily deployed in about 70 different countries to carry out a wide array of missions, such as

participation in U.N. peacekeeping operations, humanitarian assistance, nation building, counternarcotic activities, and training exercises.

Figure 1.2: U.S. Army Forces Deployed Overseas (as of March 1993)



Source: Army testimony before Subcommittee on Military Forces and Personnel, Armed Services Committee, U.S. House Of Representatives, March 1993.

Assignment Policies in Europe and Korea Differ

As shown by figure 1.2, Army troops in Europe numbered about 105,000 as of March 1993, representing the largest U.S. presence abroad. About 27,000 troops were stationed in Korea, the second largest overseas presence. Although personnel in both locations are assigned on an individual replacement basis, important differences exist in these programs.

All personnel assigned to Europe may bring their dependents with them on the condition that they serve a 3-year assignment. Single soldiers and those married soldiers electing not to bring their dependents must serve 2 year assignments, with an option of extending for a second 2-year assignment. All permanently stationed personnel are rotated into and out of Europe on an individual replacement basis.

A wide array of dependent-related facilities and services has been constructed due to this assignment policy. Facilities and services provided specifically for U.S. military personnel with dependents include family housing units; schools; base exchanges; and morale, welfare, and recreation facilities (i.e., child care programs and youth services). These facilities and services are sized to accommodate dependent personnel in addition to assigned military personnel. Most dependent-related facilities are either provided by a host government or constructed with appropriated funds. Other dependent-related facilities, which include bowling alleys, book stores, and movie theaters, are generally operated on a revolving fund basis from nonappropriated funds collected from user fees.

In contrast, about 93 percent of the soldiers in Korea are offered 1-year assignments and may not bring their dependents. As in Europe, these personnel rotate into and out of positions as individuals rather than as units. The remaining soldiers, about 7 percent, are offered 2-year assignments and are permitted to bring their dependents. Some of these latter soldiers elect to serve shorter 1-year assignments without dependents. The 2-year accompanied assignments are restricted to a limited number of positions identified as requiring longer tour lengths to achieve continuity in specified functions.

As in Europe, DOD provides housing, schooling, and other services to the families of soldiers who fill these "command-sponsored" positions. However, because far fewer dependents reside in Korea, the extent of these facilities and services is much less. In Korea, command-sponsored dependents are required to reside in or south of Seoul, such as in Taegu, Pusan, and Osan. DOD operates family housing; dependent schools; Army and Air Force Exchange Services; and morale, welfare, and recreation centers to serve dependents in these areas. Both family housing and schools are sized to meet the dependents' demand. Most soldiers without dependents serve in combat-related positions north of Seoul, where facilities are limited to commissaries and post exchanges.

Army Has Attempted Various Rotation Programs

Based on the potential cost savings that might accrue by reducing dependent-related facilities in Europe, some Members of Congress have suggested that at least some portion of the remaining force be sent to Europe for shorter, unaccompanied tours as in Korea. Others have suggested expanding the use of short-term intermittent rotations as a means of achieving a more modest U.S. presence than the present contingent of permanently stationed troops.

These ideas are not new. The Army has attempted various unit and individual replacement rotation programs throughout this century to reinforce combat units during wartime and to supplement or replace deployed forces during peacetime. These programs have varied according to the length of the assignment and whether the assignment was offered on an accompanied or unaccompanied basis, whether individuals or units were rotated, and whether the forces were intended to replace or augment forces.

Most of the rotation programs attempted in Europe entailed the rotation of entire units. Although their objectives varied, they were often aimed at reducing costs and improving readiness, unit cohesion, and morale. According to DOD and the Army, these programs were canceled because they were too costly, did not improve readiness, led to family separation problems, and/or could not be sustained due to insufficient numbers of like units in the Army's force structure. Table 1.1 shows the key features of the major unit rotation programs that the Army implemented in Europe and Korea and the reasons DOD cited for their cancellation. Additional details on these programs are included in appendix I.

Table 1.1: Profile of Past Major Army Unit Rotation Programs

Name	Dates and locations	Length in months	Type ^a	Program objectives	Reason for cancellation
GYROSCOPE	1955-59 Europe	36	A	Improve morale and cut support costs	No cost savings; reduced readiness
OVUREP ^b	1961 Korea	12	U	Reduce personnel turbulence and cost and improve cohesion	Interrupted by the Berlin crisis
LONG THRUST	1961-64 Europe	3	U	Test mobility and augment existing force using prepositioned materials	High cost; reduced readiness due to personnel turbulence
ROTAPLAN	1962-64 Europe	6	U	Reduce outflow of gold and dependent presence	Reduced readiness due to personnel turbulence stemming from concurrent LONG THRUST
Brigade 75/76	1975-79 Europe	6	U	Increase combat force in relation to support force	Equipment transfers to deploying units degraded readiness of other units
COHORT ^c	1981-91 Europe	18	A	Increase unit cohesion, morale, and readiness	U.S. Army, Europe (USAREUR) could not absorb personnel from disbanded units
COHORT	1981-90 Korea	12	U	Increase unit cohesion and reduce turbulence	Insufficient like units to sustain program

^aAccompanied with dependents shown by A; unaccompanied without dependents shown by U.

^bOverseas Unit Replacement Plan.

^cCohesion, Operational Readiness, and Training.

Source: Various DOD and Army studies.

DOD Studies of Rotation Programs Have Had Shortcomings

To address congressional concerns, DOD and the Army performed at least five studies between 1987 and 1990, each comparing the relative costs of permanent change of station assignments and 179-day temporary duty assignments. The intent of these studies was to determine whether instituting such a change could result in cost savings through a reduced need for dependent-related facilities. Each study concluded that 179-day rotations would not be advantageous due to (1) their relatively higher cost, (2) reduced combat readiness created by the frequent turnover and reduced productive time, (3) increased personal and family problems created from family separations, and (4) insufficient numbers of like units in the United States to sustain the rotations.

We analyzed these five studies as part of our initial review and reported in June 1992 that the conclusions of these studies could be questioned since not all relevant factors had been considered.² We found the following.

- The cost comparisons did not cover all relevant cost factors and did not consider the full range of rotation options. Frequently, DOD was asked to compare the cost of 6-month rotations to the existing system. Because the temporary duty status of the 6-month rotations makes this one of the highest cost rotation options, the findings arguing against a change in assignment policy were predictable.
- The studies did not acknowledge that readiness routinely declines whenever units prepare for rotation—both going to a new location and returning from it—regardless of whether such a rotation is within the continental United States or overseas in peacetime or wartime.
- The studies did not fully examine what actions could be taken to overcome the problems of family separation that have been associated with unaccompanied tours.
- The Army's assessments that its force structure could not sustain force rotation were made prior to recent force reduction actions and did not consider rotation options that would provide less than a continuous presence overseas.

As we reported in 1992, these studies might have reached different conclusions had lower cost alternatives been considered and all factors been taken into account.

Objectives, Scope, and Methodology

The former Chairwoman, Subcommittee on Installations and Facilities, House Committee on Armed Services, asked us to examine the Army's past experience with force rotation programs, including the current program in Korea, with the aim of assessing whether such programs were a viable alternative to the current personnel assignment policy being used for Europe.

In conducting our analysis, we narrowed our scope of alternatives to four options that we believed to be the most viable. These alternatives were (1) an individual replacement policy permitting only limited numbers of accompanied assignments as in Korea, (2) a similar rotation program featuring unit, rather than individual, replacements; (3) short-term

²Letter to The Honorable Patricia Schroeder, Chairwoman, Subcommittee on Military Installations and Facilities, Committee on Armed Services, House of Representatives (GAO/NSIAD-92-237R, June 1, 1992).

intermittent rotations without dependents; and (4) a continuation of the current system of rotating soldiers with dependents.

To understand how the Army has used force rotations in the past, we reviewed reports and studies of past programs and interviewed DOD and Army officials in Washington, D.C., and in Europe. We also discussed rotation programs with U.S. Forces Command officials at Fort McPherson, Georgia, and analyzed documentation about these programs. On June 1, 1992, we reported our assessment of key DOD and Army studies of past force rotation programs to the former Chairwoman of the Subcommittee. This assessment identified the major factors that DOD and the Army cited as contributing to the cancellation of past programs and as limiting the potential for expanded use of rotations. We also provided our observations on the shortcomings of these studies.

To determine what features of the program in Korea would need to be considered for a similar program for Europe, we interviewed officials at Headquarters, U.S. Forces, Korea and Headquarters, Eighth U.S. Army, Korea, in Yongsan Garrison, Seoul, Korea; and the 2nd Infantry Division in Camp Casey, Korea. We also visited seven installations of the 2nd Infantry Division to obtain information on the types of facilities at these locations and their usage. At Eighth U.S. Army headquarters, we obtained documentation on the costs of operating installations and dependent-related facilities in Korea. We also obtained the perspective of Eighth U.S. Army officials on the additional facilities that would be required in Korea if most soldiers were permitted to bring their dependents.

To assess the feasibility of implementing a program in Europe similar to that used in Korea, we visited Headquarters, EUCOM, in Stuttgart, Germany; Headquarters, USAREUR, in Heidelberg, Germany; and Headquarters, 3rd Infantry Division, in Wurzburg, Germany, and its 1st Brigade in Schweinfurt, Germany. We obtained the views of responsible officials at each of these locations on the feasibility of implementing various types of rotation programs in Europe and obtained data on the costs of providing facilities and services for dependents, the statistics on troop populations and their locations, and the cost savings that are currently being achieved in consolidating and closing facilities. We also interviewed Army officials who had been involved in past Army unit rotation programs, including COHORT and Brigade 75/76, to gain their personal perspectives on the merits and drawbacks of these programs.

To identify the factors that would need to be considered in expanding the use of short-term intermittent unit rotations in Europe, we visited the Army's major training areas at Hohenfels and Grafenwoehr, Germany. We discussed with Army officials at these locations the obstacles that would need to be overcome if such rotations were expanded at these areas. We also obtained information on the usage of these training areas and the impact that the Status of Forces Agreement (SOFA)³ provisions might have on the feasibility of expanding force rotations to these areas from the United States. We also discussed these topics with officials at each of the above-noted locations in Europe. At Schweinfurt, we also obtained the views of a group of enlisted personnel on the impacts a change in the assignment policy in Europe might have on their personal lives and Army recruiting.

To quantify the relative costs of various assignment policies, we made certain assumptions regarding tour length and the number of positions that might remain as accompanied assignments. We made assumptions that we believe created reasonable force rotation scenarios, and our report clearly states wherever we made such assumptions. In gathering cost data, we found that it was virtually impossible to precisely compare the costs of the current assignment policy with the alternatives we evaluated without making a large number of assumptions about tour length, extent of dependent transfers, and amount of available on-base housing in the United States. We also found that it was difficult to make valid comparisons without knowing what further consolidations will take place in Europe and what facilities will remain open. These decisions have not been finalized. We recognize that changes in these assumptions could significantly affect the relative costs of various alternatives. Nevertheless, we attempted to make reasonable cost comparisons where possible and, where this was not possible, categorized cost factors as either increasing or decreasing under our scenarios.

We conducted this review from February 1992 to June 1993 in accordance with generally accepted government auditing standards.

³SOFA governs the stationing of U.S. forces in Germany. Our discussion of SOFA includes both the NATO SOFA and its German Supplementary Agreements.

Replicating Program in Korea Is Possible but Has Disadvantages

Expanding the use of unaccompanied force rotations in Europe, as is the norm in Korea, is possible, and cost savings due to the reduced need for dependent-related facilities could result. However, these cost savings would be at least partially offset by certain costs that would increase, both in Europe and the United States. In particular, transportation costs associated with more frequent moves of both Army personnel to and from Europe and of dependents within the United States would substantially increase. Also, Army officials envision unquantifiable factors, including adverse impacts on readiness, morale, and U.S. influence within the North Atlantic Treaty Organization (NATO) that are difficult to assess but should be taken into account in considering whether such a rotation program should be implemented in Europe. The Army's experiences with the program in Korea can be instructive in assessing how such a model might be implemented in Europe.

Most Personnel in Korea Serve Without Their Dependents

A major difference in the profile of the Army's personnel in Korea and Europe is the proportion of personnel who serve overseas with their dependents. As shown by table 2.1, 4 percent of the Army's personnel serving in Korea as of February 1993 were accompanied by their dependents compared to 55 percent in Europe.

Table 2.1: Army Personnel Serving in Korea and Europe With and Without Their Dependents

	Korea ^a		Europe ^b	
	Number	Percent	Number	Percent
With dependents	1,144	4	57,238	55
Without dependents	25,937	96	47,154	45
Total	27,081	100	104,392	100

^aAs of February 1993.

^bAs of May 1993.

Source: Eighth U.S. Army, Korea, and USAREUR.

The difference in the number of personnel serving with dependents lies in the number of positions that are designated as command sponsored. Individuals serving in these positions are permitted to bring their dependents, who are then provided housing, schooling, and other services. In Korea, the Army has designated only 2,007 positions as command sponsored. These include (1) 121 key positions, whose incumbents must serve 2 years even if they elect not to bring dependents; (2) 15 key and essential positions, which are usually filled on an accompanied basis by

personnel who must serve 2 years due to the critical nature of these positions; and (3) 1,871 permanent positions, which are offered on a 2-year basis to achieve continuity. Individuals filling these latter positions may elect to serve only 1 year on an unaccompanied basis. In contrast, according to USAREUR officials, all married individuals assigned to Europe are offered 3-year command-sponsored positions and are entitled to bring their dependents. Unaccompanied soldiers, on 2-year assignments, currently represent 42 percent of all personnel in Europe. These soldiers may exercise the option of a second 2-year assignment.

The actual number of individuals serving in both Korea and Europe with dependents is somewhat fewer than the number of command-sponsored positions because some individuals elect not to bring their dependents with them. Estimates vary on the percentage of soldiers accepting the 2-year accompanied tours in Korea. However, according to personnel records, about 43 percent of the 2,007 individuals offered 2-year command-sponsored positions elected to serve a shorter 1-year tour without their dependents. In Europe, about 16 percent of the married individuals offered command-sponsored positions elected shorter unaccompanied 2-year assignments. Taken together, single soldiers and married soldiers without dependents comprised about 45 percent of the Army's total force in Europe.

Other Costs Would at Least Partly Offset Savings on Facilities

Dependents at overseas locations increase the administrative burden of the sponsoring command because it must provide larger facilities that normally serve military personnel in addition to facilities, such as family housing, expressly for dependents. Expansion of unaccompanied assignments in Europe would theoretically yield some cost savings due to the reduced need for such dependent-related facilities. However, we found the potential savings on facilities in Europe would be at least partially offset by increased costs in other cost categories either in Europe or the United States.

The net costs and savings that are associated with moving to fewer accompanied assignments in Europe are dependent on a wide variety of assumptions, such as the installations that will remain in Europe after the drawdown, the number of positions that will need to remain on an accompanied basis for the sake of continuity, the extent and location of transportation moves for dependent families, and the level of services needed at U.S. bases to accommodate additional dependents. Table 2.2 shows our assessment of whether each major cost factor would increase

or decrease in Europe and the United States if most accompanied assignments were converted to unaccompanied tours. The assessments in the table assume that (1) about 10 percent of all positions would remain command-sponsored and entail 3-year accompanied assignments, (2) the remaining 3-year accompanied assignments would be reduced to 1-year unaccompanied assignments, and (3) there would be no change in the policy of offering 2-year assignments to single soldiers.

Table 2.2: Indications of Cost Increases and Decreases Associated With an Expansion of Unaccompanied Assignments in Europe

Cost factor	Europe		United States		Reason for change
	(+)	(-)	(+)	(-)	
Transportation		X			Requires up to three times as many moves as current policy.
		X	X		Reduced costs for moving household goods overseas.
Family housing					Closures.
		X	X		More family housing could be needed at U.S. bases, depending on drawdown actions or on local economies.
DOD schools					Closures/reductions.
		X	X		Increases at U.S. bases and increased federal impact aid to local schools.
Family separation allowance			X		More families separated, thereby increasing Army costs.
Medical and dental care		X	X		Dependent care required in both Europe and the United States.
Morale, welfare, and recreation activities	X		X		Increased use by soldiers in Europe and by dependents in the United States would increase respective operational costs.

The following sections provide more information about the offsetting costs within a few key cost categories.

Transportation Costs Could Increase

Increased transportation costs would most likely accompany a move toward additional unaccompanied tours in Europe due to the increased number of soldier and dependent moves. Assuming that about 10 percent of the positions in Europe would remain as 3-year accompanied assignments and that 2-year tours for soldiers transferring to Europe without their dependents would continue, transportation costs for about 55 percent of the personnel assigned to Europe would remain the same since no additional moves would be required. However, as illustrated by table 2.3, substantially more moves would occur if the remaining 3-year accompanied assignments were converted to 1-year unaccompanied assignments. This is because soldiers' families are permitted to move to a location of their choice within the United States when the soldiers are

assigned to an unaccompanied position overseas. In addition, DOD must then move both the soldiers and their families from these different locations to the new duty site when the overseas assignment is completed.

Table 2.3: Illustrative Moves Associated With One 3-Year Accompanied Assignment in Europe Compared to Three 1-Year Unaccompanied Assignments

One 3-year accompanied assignment		
Individuals transferred	From	To
Soldier Smith and dependents	Ft. Riley, Kansas	Frankfurt, Germany
	Frankfurt, Germany	Ft. Lewis, Washington
Three 1-Year Unaccompanied Assignments		
Soldier Jones	Ft. Riley, Kansas	Frankfurt, Germany
	Frankfurt, Germany	Ft. Bragg, North Carolina
Jones dependents	Ft. Riley, Kansas	San Francisco, California
	San Francisco, California	Ft. Bragg, North Carolina
Soldier Miller	Ft. Benning, Georgia	Frankfurt, Germany
	Frankfurt, Germany	Ft. Hood, Texas
Miller dependents	Ft. Benning, Georgia	Miami, Florida
	Miami, Florida	Ft. Hood, Texas
Soldier Davis	Ft. Drum, New York	Frankfurt, Germany
	Frankfurt, Germany	Ft. Meade, Maryland
Davis dependents	Ft. Drum, New York	Boston, Massachusetts
	Boston, Massachusetts	Ft. Meade, Maryland

The extent of additional costs that would be incurred as a result of these extra moves depends on various factors, many of which are associated with the individual choices of the military personnel involved. For example, dependents could choose to remain on or near the installation to which the soldier was formerly assigned, thereby eliminating the cost of moving the family to a different location. Also, the costs of moves can vary significantly depending on the distance involved and the personal decisions such as shipping automobiles.

While it is difficult to quantify these additional transportation costs, the volume of personnel affected by the change in assignment policy indicates that these costs could be substantial. If 45 percent of the projected 60,000 positions in the Army's force at the end of fiscal year 1995 were converted from 3-year accompanied to 1-year unaccompanied assignments, 27,000

Army personnel would be affected.¹ On the basis of average costs of transporting household goods within the United States and between the United States and Germany, we estimate that the additional costs would range from about \$5,700 to \$8,700 a family, depending on the soldier's rank.² Transportation costs under this type of rotation would be even greater if current 2-year assignments for single soldiers were reduced to 1-year assignments to provide equity with married soldiers.

Housing Costs Are Already Being Reduced With Downsizing

The Army's costs for leased family housing in Europe would decrease significantly if most accompanied assignments were eliminated. However, such savings are already being achieved as more personnel are being moved into lower cost housing alternatives due to base closures and consolidations. As noted above, any savings in housing costs would be substantially offset by higher transportation costs.

Currently, family housing costs in Europe vary according to the type of housing provided, as shown by table 2.4. The table compares the pre-drawdown inventory of each type with that projected for the 92,200-force level.

Table 2.4: Status of Family Housing in Europe by Type, Fiscal Years 1990 and 1995 (Estimated)

Type	Description	Average annual cost	Number of units	
			FY90	FY95 (est.)
U.S. government controlled	U.S.-controlled; U.S. maintained	\$8,900	45,000	32,000
U.S. government leased	Leased from host government; U.S. maintained	12,400	17,000	9,000
Individually leased	Leased by individuals indirectly from local nationals through Government Housing Rental Program	13,500	7,000	4,000
Privately leased	Leased by individuals directly from local nationals	14,400	26,000	4,000

As downsizing in Europe has proceeded, the Army has been able to cut costs by moving families from leased housing into the lower cost alternatives. Under the Army's prior plan for reducing to 92,200 by 1995, the Army estimated that it would be able to reduce family housing costs

¹Our estimate of 45 percent assumes that 55 percent of the Army's personnel would continue to bring their dependents to Europe and that 10 percent of these would serve in command-sponsored positions and continue to bring their dependents.

²These estimates assume that all families elected to move; costs would be lower to the extent that families elected to remain at the soldiers' former location. The range of costs reflects the fact that the allowance for moving household goods is greater for officers than for enlisted personnel.

from \$1,140 million in 1990 to \$481 million in 1995. Under the revised plan to reduce the Army to 60,000, Army officials hope to move even more personnel currently in individually and privately leased housing into lower cost housing units.

Until final decisions on base closures and stationing for the new 60,000 troop level are made, the extent to which remaining personnel will match up with available housing is unknown. However, retaining these lower cost housing alternatives has been an objective of Army personnel involved in managing the drawdown. Therefore, even without a change in assignment policy, the Army may be able to move most personnel into these lower cost housing units. If this takes place, then the only housing-related cost savings associated with moving to more unaccompanied tours over the current assignment policy would be the savings achieved by operating extra barracks units, rather than a like number of family housing units. These savings would be offset by any construction costs needed to convert family housing units to barracks. However, if the barracks currently requiring renovation were upgraded, additional construction might not be required. USAREUR officials said that about \$327.6 million in operations and maintenance funding is needed to repair 21,837 of 71,165 existing barracks spaces.

Army officials in Europe also noted that any savings on family housing in Europe would also be offset by costs associated with the increased demand for family housing at U.S. bases. They pointed out that family housing on U.S. bases is always at a premium and that there are long waiting lists at many U.S. bases. According to DOD, many bases have been at well over 100 percent of their capacity during the last 2 years due to personnel returning from Europe and domestic base closure and realignment actions. This overcrowding, however, could be temporary due to the major force reductions that are taking place. DOD officials said that the overstrength situation has steadily declined from the peaks experienced in the first quarter of fiscal year 1992. They estimated that major U.S. installations would be at 100 percent of capacity or less by November 1992, a considerable drop from past installation strengths that ranged as high as 117 percent.

**Savings From DOD
Overseas Schools Could Be
Offset by Costs in the
United States**

DOD provides education for all service members' dependents from kindergarten through the 12th grade. At most overseas locations, command-sponsored dependents attend schools constructed and operated by DOD. For example, about 76,510 Army dependents attended DOD schools

in Germany in fiscal year 1992 at an annual operating cost of about \$470.8 million, or about \$6,153 per student.³

If unaccompanied assignments were instituted in Europe, the savings achieved in closing or consolidating schools would be partially offset by the need for increased Federal Impact Aid to local school districts in the United States. Under this program, a Department of Education official said that funds are provided to local school districts to compensate the districts for the impact that military populations have on educational services. Using figures provided by this official as offsetting costs, we estimate that the annual savings that are achieved by educating a military dependent child in the United States, rather than in Germany, are between \$4,500 and \$6,000, depending on whether the child attending school lives on an installation or in the local community.

If the student population in Germany could be reduced by 65,000 from fiscal year 1992 levels,⁴ annual cost savings in federal funds would, therefore, be between \$292.5 million and \$390 million. However, governments at all levels in the United States would incur additional expenses in educating these students. To illustrate, the cost of educating 65,000 elementary and secondary students in Georgia—a state with a high concentration of Army personnel—would be about \$272 million.⁵

Also offsetting these savings would be construction costs for additional classroom space at U.S. installations, if needed, and tuition costs to send remaining students to private schools in Europe if student populations were insufficient to keep the local DOD school open. These costs are difficult to predict without knowledge of the specific installations that will remain both in the United States and in Europe at the end of the military drawdown.

³By comparison, about 3,871 Army dependents attended 6 DOD schools in Korea in fiscal year 1992 at an annual operating cost of \$16.7 million, or about \$4,322 per student.

⁴This reduction would appear reasonable assuming that 10 percent of the positions in Europe remained as accompanied tours. This would leave an estimated 7,441 students in Germany—a reduction of 69,069 students over the fiscal year 1992 level.

⁵Based on a \$4,187 per pupil average cost in 1990 figures, which includes all federal, state, and local contributions. Per pupil costs vary widely among states—from about \$2,700 in Utah to about \$8,900 per pupil in the District of Columbia.

Family Separation
Allowances Would
Increase With
Unaccompanied
Assignments

When a soldier is assigned to an unaccompanied tour of more than 179 days, the spouse remaining in the United States receives an allowance to help defray incidental expenses that are incurred due to the soldier's absence. The allowance, known as family separation allowance, amounts to about \$730 a year. If 29,250 accompanied positions in Europe were made unaccompanied, family separation allowances would increase by about \$21.4 million a year.

Savings on Facilities
Depend on Extent U.S.
Bases Can Absorb
Dependents

A reduction in dependents in Europe would also affect the need for other dependent-related facilities, such as youth and child care facilities. However, these dependents would continue to require these services in the United States. The extent of cost savings would depend upon the number of families that would need these services in the United States. Those choosing to reside on or near U.S. military installations would probably use these services more than those residing in local communities, especially those away from military installations.

According to USAREUR officials, the current drawdown has, thus far, eliminated only 20 of 135 child development centers and 6 of 92 youth centers. However, as with other types of facilities, the number of command-sponsored positions and their locations would determine whether more facilities could be closed or consolidated or whether they would need to remain open, perhaps at a reduced size, to serve fewer dependents. If these facilities could be closed, consolidated, or reduced in size, their operation and maintenance costs could be reduced.

Other Costs at European
Bases Could Increase

Army officials in Europe said that certain costs would increase if soldiers were increasingly assigned without their families. For example, the Army would need to purchase and replace more furniture and the demand for food services would probably increase.

These officials also noted that about 54 percent of USAREUR's total civilian employees are soldiers' dependents. They said that it would be costly to replace these employees with local national employees. For example, local nationals are entitled to full benefits while employed, require at least 9 months notice if termination is imminent, and receive separation benefits.

Residual Value of Released Facilities May Result in Additional Monetary Return

As installations are vacated and turned over to the host governments, agreements are to be reached between U.S. and host governments concerning any residual value remaining, at the time of release, in construction and improvements that were financed by the United States. Since most of the U.S. European installations are located in Germany, the residual value negotiations for these installations are the most important ones. In July 1991, U.S. and German negotiators agreed that all negotiations would be settled by the end of the fiscal year after each installation was returned to Germany. However, this agreement subsequently broke down and, as of April 1993, negotiations were proceeding slowly due to differing points of view about the extent of improvements and damages to the facilities being turned over.

The extent of compensation that the United States may ultimately receive from these negotiations is questionable, if past experience is any indication. For example, for 80 sites returned to the German government between 1963 and 1990, the United States recouped about \$3.2 million, or about 33 percent, of its initial claim of \$9.7 million. These settlements covered all U.S. claims up to the current drawdown. Also, due to budgetary problems in Germany, the German legislature only appropriated the equivalent of about \$24 million to pay residual value to all NATO allies for bases released to Germany in fiscal year 1991. This amount is substantially below the minimum acceptable levels established by U.S. negotiators for U.S. claims alone.⁶

While the extent of U.S. improvements and damages to the facilities figures prominently into the negotiated value, the most recent SOFA with Germany now explicitly cites environmental damage caused by U.S. forces as an offset to their value. These costs could substantially reduce the negotiated value of U.S. facilities returned to Germany.

U.S. Officials Envision Other Risks and Costs Related to Unaccompanied Assignments

Army officials have generally been opposed to expanding the use of unaccompanied assignments in Europe because they believe that such assignments would adversely affect continuity, training, and morale. In addition, they emphasized that withdrawing dependents might lessen U.S. influence in NATO since the Europeans view the presence of soldiers' dependents as a tangible demonstration of U.S. commitment to the alliance. Finally, they noted that, even with a change in assignment policy, some soldiers would continue to bring their dependents to Europe at their

⁶For more information on the status of these negotiations, see U.S. Military Presence in Europe: Issues Related to the Drawdown (GAO/T-NSIAD-93-3, Apr. 27, 1993).

own expense, thereby increasing U.S. liability for evacuating dependents in an emergency.

Shorter Tours Could Disrupt Continuity, Especially in Support Functions

According to Army officials in Europe, a move to additional unaccompanied assignments would adversely affect continuity and readiness. They said that the current 3-year tours permit soldiers to attain a high state of readiness because they are in their positions for long periods of time. By participating in the annual training cycle at local training areas, units can prepare for larger collective training exercises against an opposing force at the major training areas in Germany. According to these officials, the continuity of this annual training cycle would be disrupted if tours were shortened to a single year.

Although cited as a potential problem in Europe, Army officials in Korea believe that continuity is more of a problem in support positions than in combat units. They said that the short 1-year tours create problems in sustaining a smooth operation because they have to continually train new individuals, particularly in staff positions. An additional problem in continuity is created by the policy of permitting soldiers to take a mid-tour, 30-day leave, which in effect reduces their assignments to 11 months. Army officials estimated that the productive time of a soldier in Korea is about 15 percent to 25 percent compared to about 75 percent in the United States.

In contrast, officials who have served in Korea did not believe that continuity in training was as great a problem as with the support units. They noted that combat training in Korea did not vary from most stateside training and consisted primarily of integrating new individuals into a unit. According to these officials, infantry soldiers do the same job everywhere in the world. In addition, the fact that these forces are on constant alert and perform patrols daily keeps units and individuals acutely focused on their specific missions.

Morale and Readiness Could Be Adversely Affected Due to Family Separations

Army officials and studies of past programs emphasize that unaccompanied assignments lead to low morale due to family separations and that low morale affects readiness. However, the Army has adopted certain practices in Korea to counter these effects. In addition to mid-tour leave, soldiers are permitted to make free telephone calls home. Also, the Korean government and the business community have an ongoing program that permits the families of service personnel to visit Korea at a discounted

rate. Army officials added that even though the Army does not officially sanction the practice, permitting noncommand-sponsored dependents in Korea access to DOD facilities, such as commissaries and schools on a space available basis, helps to improve morale.

**Allies Could Interpret
Unaccompanied Tours as a
Sign of Reduced U.S.
Commitment to NATO**

The primary mission of the U.S. military in Europe is to advance the collective security of Europe. This mission is carried out through U.S. membership in NATO. According to Army officials, NATO allies view the U.S. policy of transferring families to Europe along with U.S. troops as a demonstration of the U.S. commitment to NATO. Officials in Europe said that a change in the current assignment policy whereby fewer families would be present in Europe might signal a reduced commitment to NATO. They noted that the allies are already questioning the U.S. commitment based on U.S. ongoing force reductions and reduced funding for NATO infrastructure projects.

**Lessons Can Be
Learned From
Experiences in Korea**

We believe that the Army's handling of its rotation program in Korea could be instructive in considering a program for Europe. The lessons learned could be its basis for establishing the number of command-sponsored positions and its handling of noncommand-sponsored dependents.

**Number of
Command-Sponsored
Positions Not Based on
Mission Needs**

On the basis of the difficulties the Army has experienced in maintaining continuity in support positions in Korea, the Army would probably need to retain some command-sponsored positions in Europe. These positions could be offered to soldiers on an accompanied basis in return for agreeing to serve a longer tour. However, the number and type of positions to be retained on this basis should be established in a different manner than in Korea.

In Korea, U.S. officials stated that command-sponsored positions are based on the number of available family housing units rather than on the operational requirements of these positions. The number and location of command-sponsored positions designated for Europe would have a bearing on what dependent-related facilities would need to be retained and at what cost. Therefore, to minimize costs, only those positions truly requiring continuity should be designated as command-sponsored positions. Basing the number of positions on available housing units could result in unwarranted costs arising from retaining more housing units and other facilities and services for dependents than may be necessary.

A second issue is that, in Korea, soldiers offered 2-year command-sponsored permanent positions may elect to fill the positions on a 1-year unaccompanied basis. Army officials in Korea said that about 43 percent of those offered 2-year positions elected the shorter tour. Reducing the desirable length of the tour in this manner would appear to defeat the stated objective of enhancing continuity and stability. Therefore, if command-sponsored positions were retained in Europe to achieve continuity, it would seem desirable not to offer the option of a reduced tour length.

Policy on
Noncommand-Sponsored
Dependents Unclear

In Korea, the Army does not have a clearly stated policy on noncommand-sponsored dependents. The Army's official policy is to discourage soldiers from bringing their dependents to Korea unless they are filling command-sponsored positions. However, the Army cannot prevent soldiers from bringing dependents to Korea and providing for their subsistence at their own expense. Army officials in Korea said that about half of the estimated 15,000 Army dependents in Korea at the time of our visit were residing on the Korean economy on a noncommand-sponsored basis.

We found that, although the Army officially discourages bringing noncommand-sponsored dependents to Korea, its practices could actually encourage it. For example, although dependents may not be housed in government housing or permitted rations for alcohol or tobacco, they are allowed to attend DOD schools on a space available basis. These schools have had excess capacity due to force reductions and openings created by those who filled command-sponsored positions but did not bring their dependents. The number of such students in the DOD schools at the time of our visit was not readily available; however, the only schools having a waiting list were in Seoul and Osan. Noncommand-sponsored dependents are also permitted access to day care centers and youth programs on a space available basis and are given free access to most other base services such as commissaries, shoppettes, clinics, and hospitals.

Officials said that, while the Army is not officially responsible for providing services to such dependents, the Army does so because it believes it has a moral obligation to provide for these dependents. Although they do not believe that providing for these individuals has been a significant problem, certain costs and risks are associated with this practice. First, facilities and services for dependents should be sized according to mission needs. In permitting additional persons to take

advantage of these benefits, the size of facilities and their staffs as well as operations and maintenance costs may be higher than necessary. Second, the policy of discouraging soldiers from bringing their dependents was established, in part, because of the security situation. By making it easier for soldiers to bring their dependents, the Army is encouraging them to subject dependents to possible danger. Finally, because these dependents are in Korea unofficially, the Army incurs additional liability for evacuating these dependents during a crisis.

Army officials acknowledged that they did not know exactly how many noncommand-sponsored dependents were in Korea or where some of them were located. This situation exists because the Army has no authority to compel dependents to register when they arrive in country, even though the Army has requested voluntary registration. As a result, it is unclear how the Army would accomplish this evacuation responsibility if a crisis arose.

Army officials in Europe differed in their opinions as to how many soldiers might elect to bring their families at their own expense on a noncommand-sponsored basis. The similarities in U.S. and European cultures and the more secure environment were cited as factors that might encourage this practice, while the high cost of living was cited as a deterrent.

Other Alternatives Do Not Offer Clear Advantages Over Current System

Alternatives to the individual replacement system used in Korea could be considered for Europe. These alternatives include (1) rotation of entire units, such as companies and battalions, which has been attempted in the past in both Korea and Europe, and (2) expansion of short-term unit rotations to bolster forward presence reduced through downsizing. As with the Korean rotations, these programs have both merits and drawbacks. The number of units of the same type that are in the Army's force structure determines the extent to which rotations could provide a continuous or only intermittent presence. Given the drawbacks and the difficulties associated with alternative rotation programs, a final option is to retain the current system and continue efforts to consolidate operations and improve efficiency to reduce costs.

Unit Rotations Possible, but Past Problems Must Be Overcome

One alternative to the individual replacement system that is used in Korea is to implement a unit rotation program similar to that of the Korea COHORT and Brigade 75/76 programs. This alternative would entail the rotation of entire units, rather than individuals, for 1-year unaccompanied tours.

The Army has implemented unit rotation programs to various overseas locations, including Europe, since the 1950s. The objectives of these programs have varied; however, many were aimed at improving unit cohesion to enhance readiness. Although these programs encountered problems and were ultimately canceled, better planning and adjustments in their implementation might have made them more successful. If unit rotations are considered for Europe, Army planners will need to seek means to overcome the problems identified with past programs.

Better Planning and Modified Design Might Have Made COHORT Program More Successful

The theoretical advantage of unit rotations over individual rotations is the increased unit cohesion and effectiveness thought to stem from personnel serving together as a unit over an extended period of time. This concept is characteristic of some foreign military organizations, including the United Kingdom's regimental system and the Israeli Army. The Army has implemented various unit rotation programs in the past, most recently in Europe and Korea under the COHORT program. In Europe, the program was designed to keep soldiers together in a single company or other small unit for 3 years with half of this time at a U.S. location and the other half at a European site.

The original concept of the COHORT rotation program, which ran between 1981 and 1991, was to

- reduce personnel turnover and enhance cohesion,
- improve continuity and readiness in forward deployed forces,
- promote a sense of affiliation to a specific unit by offering soldiers repeated opportunities to serve with a designated unit throughout their careers, and
- increase the sense of community and stability for Army families by offering soldiers multiple assignments to a single U.S. installation ("home basing").

Cost savings do not appear to have been a major objective of the COHORT program in Europe since dependents were permitted to accompany military personnel. According to Army officials, it costs the same to move personnel whether they are moved as individuals or as units, all other features being equal.

Army personnel said that various problems arose with the COHORT program and that these problems ultimately led to its cancellation. In implementing the COHORT program, the Army deviated somewhat from its original concept. Under the Army's plan, selected types of combat units were formed as COHORT units from new recruits. These units remained together for a 3-year period, training for the first 18 months in the United States and then deploying to Europe as a unit, without equipment, for the remaining 18 months. However, rather than be afforded additional opportunities to serve together as the COHORT concept envisioned, units disbanded at the end of the 3 years and their personnel were reassigned.

A primary reason cited for canceling the program was that the Army in Europe could not absorb all the service members from disbanding COHORT units. Army officials explained that these soldiers were required to remain in Europe because a foreign service requirement specified that individuals serving overseas on an accompanied basis had to serve a minimum of 3 years. COHORT units, however, rotated to Europe for 18-month assignments, thus leaving an additional 18 months for accompanied personnel to serve in Europe when their units disbanded. Had an exemption from this requirement been obtained or had the program been implemented solely on an unaccompanied basis, these personnel could have been reassigned to positions in the United States.

Army planners also did not include the home basing concept in Europe's COHORT program. Under the original concept, soldiers could expect

repeated assignments at the same U.S. installation as a means of enhancing stability for families. Home basing was envisioned as helping to alleviate the service members' concern about the welfare of their dependents during rotations, since dependents would be in familiar surroundings and would mutually support one another. Had home basing been implemented, a support structure for family members of soldiers electing not to bring their dependents to Europe could have been put into place.

Based on the experiences of the COHORT program, Army officials said that combat units such as armored companies, infantry companies, or field artillery batteries are probably better candidates for a unit rotation program than combat support and combat service support units. Combat support and combat service support units often have a large number of different military occupational specialties and, thereby require many different types of training. In addition, according to Army officials, it would be difficult to sustain a rotation of many types of support units because the majority of support units are in the reserves and would, therefore, not be available for long rotations.

Brigade 75/76 Was Major Undertaking

The Brigade 75/76 program was initiated to increase the combat capabilities in Europe to face the growing Soviet ground threat in the mid-1970s. Under this program, the brigade headquarters and the support battalion served 3-year accompanied tours and the ground combat units served 6-month unaccompanied tours. Although the program was successful, a strain was felt by the nondeploying units that met the needs of the deploying brigades. The turbulence of transferring equipment and personnel from nondeploying units to the deploying units left the remaining units in a state of degraded readiness.

Personnel associated with the program told us that extensive transfers of personnel and equipment were necessary to create battalions similar to those rotating out of Europe. As a result, it then became more difficult to prepare latter units to subsequently participate in the program. They said that this entire process was extremely taxing in terms of the time and effort involved and created a great deal of personnel turbulence.

Army personnel acknowledged that the logistics of managing the equipment and supplies improved under this program with the second round of rotations and that, by the end of the program, participating units were among the best trained in the Army since they had all of their

personnel and equipment and had undergone extensive training. Although they emphasized that the program was a mammoth undertaking, Army combat units are much better staffed and equipped today than they were in the 1970s. Accordingly, if such a program were implemented today—perhaps at a lower level such as the battalion level—combat units would probably require fewer transfers of equipment and personnel.

**Force Structure
Limitations and Desired
Time Between Rotations
Have Constrained the Use
of Unit Rotations**

The extent to which a continuous forward presence could be sustained through unit rotations depends on both the number of like units in the force and the desired time between overseas deployments. According to DOD, these factors have constrained the use of unit rotations in the past. The more frequently that units rotate and the longer the time is between overseas assignments, the greater the force size that is required to sustain the rotation. For example, three like units in the United States are required to sustain a 6-month unit rotation if a continuous presence is desired. This would permit the soldiers an 18-month assignment in the United States between each overseas assignment—the interval that the Army considers desirable if it is to retain personnel and encourage enlistment. To sustain a 1-year rotation with 2 years between overseas assignments, the requirement for like units in the United States is reduced to two.

Some unit rotations could not be sustained on a continuous presence in Europe due to insufficient numbers of like units in the active component force structure. Table 3.1 shows the extent to which the Army's force structure could sustain the rotation of various types of combat units on 6-month and 1-year bases. Army officials believe that contingency force units should not be part of a rotation program since they should be available at all times to rapidly respond to a crisis anywhere in the world. This force contains 5-1/3 Army divisions that would not be available if this line of reasoning is accepted.

Chapter 3
Other Alternatives Do Not Offer Clear
Advantages Over Current System

Table 3.1: Extent to Which Army's Force Structure Could Sustain Rotations of Combat Units With and Without Using Contingency Forces

	Units in continental U.S. available to sustain rotations		Units in Europe to be rotate	6-mo. unit rotations		1-year unit rotations	
	With	Without		With	Without	With	Without
Heavy brigade headquarters	17	10	4	yes	no	yes	yes
Light brigade headquarters	10	2	0	n/a	n/a	n/a	n/a
Armored battalion	19	15	6	yes	no	yes	yes
Armored cavalry squadron	16	6	2	yes	yes	yes	yes
Mechanized battalion	18	9	7	no	no	yes	no
Light infantry battalion	31	7	1	yes	yes	yes	yes

Note: Based on the Army's fiscal year 1994 force structure. Rotation possibilities would be further narrowed if additional Army force reductions were made.

As noted in the table, it would not be possible to sustain 6-month rotations of mechanized battalions—key combat units in Europe—even if contingency force units were used. One-year rotations of these battalions would be possible only if contingency force units were used. Armored battalions—also key combat units in Europe—could be rotated in all situations except for 6-month rotations without the contingency force. However, if maintaining less than a continuous presence was possible, fewer like units would be required to sustain the rotations. Alternatively, a more continuous presence could be provided if the length of periods between overseas assignments were reduced—an option that Army personnel both in Washington and Europe believe would adversely affect recruiting and retention.

One problem envisioned by officials in Europe is that not all seemingly similar units are alike, either in terms of personnel or equipment. For example, based on their priority for deployment, some units have the more modern M1A1 tanks while others have older M1 tanks. These differences would have to be made up through transfers of people and equipment prior to deployment or retraining upon arrival in Europe to provide more similar units.

Short-Term Rotations Problematic, but Could Provide Presence as Troops Are Reduced

Rotating units on training exercises could be used to supplement forward stationed troops and bolster U.S. forward presence. However, Army officials in Europe were concerned about the impacts that such rotations might have on combat readiness. They were also concerned that intermittent rotations would not demonstrate the same level of commitment to NATO as permanently stationed troops in Europe. The potential for expanding such rotations at the major training areas in Europe would be constrained by restrictions posed by SOFA. In addition, equipment would have to be provided for these rotations, and continuous drawing of equipment from prepositioned stocks and transporting it to the training areas do not appear to be practical from the standpoint of cost or logistics except on a selective basis.

Officials at Training Areas Envision Degraded Readiness From Rotations

Army officials in Europe believed that substituting short-term rotations for permanent stationing of some troops would adversely affect the annual training cycle and combat readiness. They cited lost training time due to the gear up, gear down transitions of moving into and out of Europe as detrimental to readiness and questioned whether the limited time remaining at the training sites would be worthwhile.

Army officials in Europe said that while rotations of smaller units such as companies are possible, it would be difficult to integrate these units into collective training exercises. They noted that training in Europe is a cyclical program that begins at local training areas and continues throughout the year until it culminates in an annual collective training exercise at the major training areas in Germany. In their opinion, unit rotations would disrupt the training cycle and degrade the training program's effectiveness. They reasoned that these rotating units would have missed a portion of the local training and would not be able to participate as effectively in the collective exercise. They feared that readiness of the troops in Europe would, thereby, be jeopardized.

Officials at Grafenwoehr, USAREUR's 7th Area Training Center, said that it would be difficult for units rotating into Europe to be integrated into their training program. They explained that gunnery training is accomplished by moving units through a series of training levels and that units must achieve proficiency at each level before moving on to the next. According to these officials, it would be difficult for units recently rotating into Europe to pass expeditiously through the training levels since they would not have participated in the same schedule of training as other units in Europe.

Although these reservations were expressed, we believe that units participating in a rotation to Europe, however, could schedule their training in the United States to correspond to the program now conducted in Europe. Also, it is not clear why this problem would be substantially greater with unit rotations than under the current system. Currently, one third of the personnel in Europe turn over each year under the individual replacement program and also miss some portion of the year's training cycle.

SOFA Could Affect Feasibility of Training Rotations

Certain provisions of SOFA and its supplementary agreement pose potential limitations on the Army's ability to expand rotations from the United States to the major training areas in Germany. The greatest obstacle posed by SOFA is the geographic limits it imposes on a training site, which would prevent an expansion of storage facilities. The Combat Vehicle Support Division Facility at Grafenwoehr currently houses one company-sized set of equipment. Thus, to meet the equipment needs of rotating units, this facility would have to be upgraded to a facility comparable to a major storage site for prepositioned materials. Such an upgrade would require substantial construction costs and the Army to obtain land to accommodate the new facilities. Army officials were doubtful that the German government would permit such an expansion due to SOFA restrictions on training areas.

A second obstacle is that SOFA requires the United States to notify the German government 95 days in advance of any rotational force greater than 200 military personnel from the United States. Under the agreement, Germany may disapprove of the rotation within 45 days of the notification. This provision would affect intermittent training rotations above 200 military personnel, which would include most battalion-sized organizations. USAREUR officials said that there would be no guarantee that the German government would approve an increased level of rotations from the United States. They reasoned that Germany is generally content to permit units permanently stationed within Germany to train at the major training areas. However, they were less certain that Germany would permit these additional rotations from the United States unless the United States was willing to permit, in turn, German troops to train at the National Training Center in California. This obstacle may have been removed with the recently concluded supplement to SOFA, which provides some reciprocity in this regard.

SOFA also limits the type and duration of training that may be conducted at training areas to certain hours and days, confines certain activities to defined areas (zones) around Grafenwoehr and Hohenfels, and imposes restrictions on noise. These restrictions might prevent major deviations in the current content, structure, and location of the current training programs conducted at these training areas.

**Alternative Means of
Handling Equipment Also
Entail Substantial Costs**

Army officials said that it would be cost-prohibitive for units to transport their own equipment to Germany from the United States for short tours. However, the Army maintains several major storage sites for prepositioned material in Europe from which rotating units can withdraw equipment. These sites, known as POMCUS, are major operations that involve not only storage but also the upkeep and maintenance of the equipment. The cost of operating and maintaining these sites in fiscal year 1992 totaled \$146 million.

The nearest such storage site to Grafenwoehr and Hohenfels, the major training areas, is about 170 miles away, at Mannheim. Although it would be possible for units to withdraw equipment from a storage site for prepositioned material, substantial costs would be involved. For example, according to Army officials, the cost to move a brigade's worth of equipment from the nearest prepositioned material site to Hohenfels ranges from \$500,000 to \$750,000. Moving a battalion's equipment might, therefore, be about one-third of this cost since a brigade normally has three battalions. While infrequent withdrawing of equipment from these sites would appear feasible, frequent unit rotations requiring constant withdrawals from remote storage sites and transportation to the training areas would appear to be a costly and impractical alternative.

Another alternative for handling equipment might be for the Army to retain equipment at facilities vacated by units leaving Europe and then have the rotating units transport this equipment to the training areas. This alternative appears to be the most workable means of handling unit equipment under this type of rotation, particularly since some installations are relatively close to the major training areas. However, personnel would need to remain in place to process units into and out of the theater, maintain equipment and prepare it for the next unit, and perform many other tasks to keep the unit location operational. Thus, the logistics of this alternative would need to be carefully planned. Also, this alternative would negate the current savings associated with facility closures and

would tie up equipment that might be used on a more consistent basis in the United States.

Few Advantages of Training in Germany Over Training in the United States

Intermittent rotations would provide a presence that could demonstrate continued U.S. commitment to NATO in the face of declining permanently stationed troop levels. If the training program were entirely refocused, it might offer increased opportunities for joint training with allies. However, beyond these factors, the actual training experience in Germany has only limited advantages over the training that can be obtained at the National Training Center in the United States.

According to Army officials, the only differences between training at Grafenwoehr and Hohenfels and training at the National Training Center are in the terrain, amount of visibility, and maneuver area. Whereas the National Training Center offers a desert training experience, Hohenfels provides wooded terrain. Additionally, Grafenwoehr and Hohenfels offer training in an area with limited visibility and a wet/cold weather environment. However, live fire restrictions are not as rigorous at the National Training Center and maneuverability distances are longer. Army officials concluded that, although the training in Germany increases proficiency in a different type of environment, it is possible to train for the European mission in the United States.

Current System Offers Advantages

A final alternative might be to simply continue current operations and concentrate on further streamlining the infrastructure as is currently occurring. Exploring new ways to provide services to a smaller population might achieve additional cost savings without changing the assignment policy. Army officials strongly believe that accompanied rotations offer many advantages over unaccompanied rotations in terms of maintaining readiness, continuity, high morale, and effective allied relationships.

Existing Training Program in Europe Considered Among Army's Best

According to USAREUR officials, the current 3-year individual replacement program provides the framework for a successful cyclical training program offered in Europe. This training program is successful because it systematically builds from an established sequence of training at local training areas to a major annual exercise at the major training areas at Hohenfels and Grafenwoehr. USAREUR officials agreed that over a 3-year period, soldiers in Europe attain, perhaps, the highest possible level of readiness through this training program.

In Germany, combat units currently train 235 days in the field per year. This includes year-round training at the local training areas preparing for more advanced training at Grafenwoehr and Hohenfels. Units receive gunnery training at Grafenwoehr and combat maneuver training at Hohenfels.

Army officials in Europe said that soldier and unit readiness increases in direct proportion to the time spent in Europe. They believe that longer deployments allow more time to train in and become familiar with the environment, which increases the readiness of soldiers and their units. Three-year assignments, in their view, provide the extended period of uninterrupted training that is needed. One DOD study noted that the operational effectiveness of deploying units is greatly improved when incoming forces can build on existing forward deployed combat elements. USAREUR officials believe that more frequent rotations would adversely affect continuity since forward deployed combat elements would be experiencing more turnover.

Successful Interaction With NATO Allies

EUCOM and USAREUR officials noted that the longer forces are deployed overseas, the greater the opportunity to develop close working relationships with allied forces. These officials said that these frequent contacts are important in building allied cooperation and in surfacing problems such as equipment incompatibilities that could hamper coalition efforts. These contacts also advance allied knowledge of U.S. tactics and operations that may become increasingly important if coalition warfare becomes more prevalent. According to these officials, without these close working relationships, the deployment of forces from Europe to the Persian Gulf in Operation Desert Storm could not have proceeded as rapidly or as well as it did. They cited numerous actions on the part of Germany, for example, to facilitate the deployment of U.S. troops as well as actions to provide support for families left behind in Europe. They attributed this cooperation to the interaction of both military personnel and their families with the German community.

As previously noted, Army personnel said that the interaction of U.S. and host country families contributes to the allies' perception that the United States is truly committed to NATO and the defense of Europe. In their opinion, backing away from the family orientation in Europe might signal a reduced commitment that could adversely affect U.S. influence in the alliance. These arguments are difficult to assess since, even with a different assignment policy, military to military contacts would continue.

**Cost Savings Are Being
Achieved as the Army
Downsizes**

USAREUR officials have been engaged in an extensive planning effort to decide what facilities should remain in Europe since the beginning of the drawdown. During this process, the Army has consolidated, reduced, or closed installations and facilities, planned for revised operations concentrated in fewer geographic areas, and developed a means of efficiently managing support activities. As a result, cost savings are being realized.

The Army has reduced the cost of family housing by retaining rent-free government housing and by moving as many families as possible out of higher cost private rentals and government leased housing units. By fiscal year 1995, the Army plans to reduce leased Army family housing from 50,000 units to 17,000, resulting in an estimated \$458 million cost saving. About 32,000 lower cost government-owned family housing units will remain. These units are rent free, thus requiring operation and maintenance support only.

The drawdown also has resulted in many consolidations and closures of other dependent-related facilities and services. For example, 68 schools have been closed in Europe, 28 of these in Germany alone. Further closures and reductions are anticipated. Also, underused facilities are being consolidated into multipurpose centers. For example, a building formerly housing only a commissary may now also house a Post Exchange and a shoppette that were formerly housed in separate buildings. Finally, many dependent-related activities and services such as those provided by the Morale, Welfare, and Recreation and Army Community Services are continuing but at a reduced level. Table 3.2 shows the Army's reduction and consolidation plans for selected types of facilities.

Chapter 3
Other Alternatives Do Not Offer Clear
Advantages Over Current System

Table 3.2: Army Plans for Facility Reductions in Europe

Facility or Installation	Pre-drawdown	Actual or planned end strength number	Date reduction is to be realized
Area support groups	15	12	4/92
Base support battalions	35	27	4/92
Hospitals	11	2 (plus 1 medical center)	12/95
Health clinics	59	29	12/95
Dental clinics	94	37	12/95
Athletic facilities	424	318	10/92
Recreation centers	94	60	10/92
Bowling centers	92	64	10/92
Craft centers	250	168	10/92
Libraries	102	62	10/92
Army community support centers	86	60	10/92
Youth centers	92	86	10/92
Child development centers	135	115	1993
Schools-Europe/Germany	216/143	129/108	FY95/FY94
Family housing operations-rent free	45,000	32,000	12/95
Family housing operations-government leased	17,000	8,000	12/95
Family housing operations-government housing referral Program	7,000	4,000	12/95
Family housing operations-private lease	26,000	3,000	12/95
Installations	858	389	12/95

Note: Based on former EUCOM plan to reduce to 150,000 total U.S. military presence in Europe. The more recent plan to reduce to 100,000 will require further reductions.

Management Initiatives Strive to Maximize Efficiency of Operations

Throughout the drawdown, officials in Europe have developed and implemented plans for inactivating and moving forces, consolidating operations, and closing facilities in central Germany and outlying areas. Under the force reduction plan that was operative until February 1993, when further reductions were mandated, the Army had planned to discontinue its operations in 17 German cities. USAREUR officials said that this reduction trend will continue under the latest plan to reduce to 60,000

and that some of the remaining planned 22 locations will also be eliminated.

**Base Support Battalions
and Area Support Groups
Created to Assist With
Drawdown**

According to USAREUR officials, Base Support Battalions and Area Support Groups were developed in fiscal year 1990 to facilitate the closure and consolidation of installations and facilities. Support battalions are intended to relieve installation commanders of the responsibility of providing support to the military communities, thereby permitting them to concentrate on tactical matters. A support group is the management team that develops and manages support battalions in its geographical area of responsibility. This type of organization enables the support group to expedite military community installation closures and consolidation plans developed by USAREUR.

**Drawdown Has Required
Extensive Management
Attention**

Resource management personnel at USAREUR said that a great deal of management attention continues to be devoted to the drawdown. By the end of the drawdown, the Army will have reduced its personnel from 213,000 in September 1990 to about 60,000 in September 1995. About 76,000 personnel were withdrawn from Europe in fiscal year 1992 at the height of the drawdown. Our April 1992 report on the Army's management of the drawdown highlighted the demands placed on USAREUR management that had stemmed from the pace of the drawdown.¹

The sheer magnitude of the drawdown has presented many challenges; however, the changing projected force level targets to which USAREUR management personnel have had to adjust have compounded the challenges. In the process, a great deal of inefficiency has arisen. Each time a new target was set, officials in Europe had to develop new plans for inactivating forces; consolidating and moving forces and activities; and consolidating, reducing, and closing facilities. With each new projected force level target, USAREUR developed a new blueprint of future operations that it believed would lead to efficient and effective operations. As the targets changed, U.S. officials halted some planned actions that were no longer necessary. However, in some cases, the actions were already taken and adjustments had to be made. USAREUR officials said that making these adjustments were not easy and entailed additional costs.

¹Army Force Structure: Personnel, Equipment, and Cost Issues Related to the European Drawdown (GAO/NSIAD-92-200BR, Apr. 9, 1992).

Chapter 3
Other Alternatives Do Not Offer Clear
Advantages Over Current System

At the end of our review, USAREUR officials were developing yet another blueprint for the units, personnel, and facilities that would remain in Europe. They said that any decision to change the assignment policy in Europe would simply add another major management undertaking to their current efforts.

Conclusions

Given the removal of what has been the major challenge to European security over the past 50 years, it is reasonable that various alternatives for meeting U.S. forward presence objectives in Europe be examined. While the forward stationing of troops with their families has been the primary means by which the United States has provided this presence in Europe in the past, the changed security environment and continuing pressures to reduce costs suggest that alternatives be considered.

All three alternatives to the current policy that we considered presume that most personnel rotating to Europe would be transferred without their dependents and for shorter assignments, thereby saving the costs of operating and maintaining dependent-related facilities in Europe. However, on the basis of our analysis, we do not believe there are strong arguments for departing from the current Army system for assigning personnel to Europe. When all key factors are taken into account—cost, readiness, morale, and force structure constraints—none of the alternatives we considered offers major advantages over the current system.

In addition to the savings from operating and maintaining the facilities that would be closed by the three alternatives, a return of the residual value on U.S. construction and improvements would be realized on the facilities returned to the host government.

Option 1: Increase Assignments Without Dependents as in Korea

Instituting a rotation policy similar to the one used in Korea would permit the Army to close some facilities specifically for military dependents and to consolidate or reduce the size of others that serve both military personnel and their dependents. However, because some dependents of military personnel and other U.S. government employees would remain in Europe, some dependent-related facilities would need to remain open at some locations despite the reduced number of Army dependents.

Savings on housing costs might also not be as great as one might expect. Because military families in Europe are increasingly being moved into lower cost housing alternatives—most onto U.S. installations—the only savings achieved through unaccompanied tours would be the difference in operating barracks units rather than family units. The costs entailed in converting family housing to barracks, if required, would reduce this savings. Also offsetting these savings would be the additional costs of housing families in the United States.

Of particular significance in moving to 1-year unaccompanied tours is the increase in transportation costs that could result in up to three times as many moves of soldiers and their families over a 3-year period. The precise cost differential depends on a variety of factors such as the location of the residence dependents choose, the shipment of automobiles, and the government's liabilities for assisting school districts.

The potential impacts of such a program on readiness need to be taken into account; however, it could be argued that disruption under the type of rotation used in Korea, if properly managed, may not be as great as the other alternatives.

Maintaining high morale is important to the Army because it sees a direct link between morale and readiness. It is, therefore, natural for Army officials to place a high priority on preserving the Army's family orientation through accompanied assignments wherever possible. Because about 37,750 soldiers might be affected by this policy change, stronger programs in the United States for families of Army personnel serving overseas might be needed. We believe the Navy's experience with such dependent support programs and DOD's recent experience in supporting the families of soldiers deployed to the Persian Gulf War might provide insights into how these programs might be strengthened.

It is difficult to assess what effects moving to unaccompanied assignments might have on U.S. relations with its allies and its influence within NATO. Although Army officials emphasize the importance of interaction between U.S. dependents and allied personnel, such interaction would continue, even though the extent of dependent interaction with local communities would be reduced with fewer dependents in Europe.

The Army's experiences in Korea could be instructive in considering a similar program for Europe. For example, basing the number of longer term accompanied assignments on the availability of family housing, rather than mission needs, does not appear to be a sound basis by which to establish the number of such positions. Continuing this practice could simply result in undue costs without achieving the desired continuity. Also, if a position truly requires a longer tour to achieve needed continuity, then offering personnel the option of serving a shorter tour would appear to defeat this purpose. Finally, the Army's practice of extending benefits to noncommand-sponsored dependents in Korea appears to contradict its policy of discouraging personnel from bringing their dependents on an

unofficial basis. This practice also entails extra risks to the Army if an evacuation is needed.

Option 2: Rotate Entire Units

Unit rotation programs, along the lines of the past COHORT or Brigade 75/76 programs, might offer advantages in unit cohesion, but they do not appear to offer advantages in cost or readiness. Such programs could only be instituted on a limited scale—perhaps only for combat battalions and other selected units—based on the number of some types of units in the Army's force structure. The large percentage of some types of combat service support units that are in the Army Reserve and National Guard rules out unit rotations for these types of units, except on a very short-term intermittent basis.

This alternative does not appear to offer either cost or readiness advantages over the assignment policy used for Korea. Assuming that all features of the two programs would remain constant, the costs of moving personnel without their families would remain the same whether they were moved as individuals or as units. If major features were changed—for example, unit equipment was transferred along with unit personnel—transportation costs would be higher and productive time in Europe would decrease. Logistical difficulties, coupled with the shorter duration of the tours, would appear to negate the advantages that might be achieved by moving entire units.

Although unit rotation programs are thought to offer the advantage of increased unit cohesion and effectiveness among unit personnel and increased support for dependents back in the United States, past programs do not appear to have achieved this objective. The manner by which these programs have been implemented may be responsible in part for this shortcoming. Difficulties associated with the COHORT program, for example, might have been avoided through better planning and closer adherence to the original concepts of this rotation program.

Option 3: Institute Short-Term Intermittent Training Rotations

Short-term intermittent training rotations are more feasible than units that rotate on a continuous basis because they require fewer like units to sustain the rotations. Although Army studies have shown short-term rotations to be infeasible from a force structure standpoint, these studies have assumed that such rotations would need to provide a continuous presence. Temporary duty costs associated with rotations lasting less than 6 months drive up the cost of this alternative, but such rotations would be

more feasible from the standpoint of cost if they were implemented on an intermittent rather than a continuous basis.

Extensive planning, particularly with respect to the handling of unit equipment, would be required to efficiently implement intermittent rotations on anything but a limited scale. It is questionable whether storage facilities at the major training areas in Germany could be expanded under SOFA. The costs and logistical considerations of continually moving equipment back and forth from remote prepositioned equipment sites make this an impractical alternative. One alternative appears to be to rotate selected combat units—perhaps at the battalion or company level—into the place of units rotating out of Europe. These units would then transport the existing equipment to the major training areas as is currently done. The Army would need to carefully plan these rotations to ensure that training and equipment of rotating units were alike or similar to units in Europe to avoid disrupting the training program and to obviate problems of incompatible equipment.

Option 4: Retain the Current System of Accompanied Assignments

When all key factors are considered, the current system offers many advantages over the other alternatives. Given the course of current force reductions in Europe, operational costs will decline with consolidations and improved efficiency even without a change in the assignment policy.

From the standpoint of readiness, the 3-year accompanied assignments offer soldiers what many Army officials believe is one of the Army's best training programs. This program is viewed as successful because it systematically builds from an established sequence of training at local training areas, culminating in an annual collective training exercise at the major training areas. While this continuity might be preserved under a unit rotation program, it would require careful planning. In addition, because soldiers are only moving once every 3 years, the time that is lost in transitioning into and out of Europe provides more productive time for these soldiers.

Although advocates of force rotations have seen cost savings as their major benefit, our analysis suggests that the savings associated with vacating facilities in Europe may be minimal. While too many variables exist to accurately compare the alternatives from the standpoint of cost, two key factors suggest that the alternative may not provide a cost saving over the current system. First, unless the Army can institute policy and program changes that would discourage long-distance dependent moves,

the increased transportation costs of multiple dependent moves would substantially offset the savings on facility operations in Europe. Second, some savings in Europe may simply result in additional costs in the United States. In addition, unless there is a major change in the course of current negotiations, it appears that the United States will not realize the magnitude of proceeds negotiators had anticipated in returning facilities to host nations in Europe. By continuing to centralize Army operations, close and consolidate facilities, and improve the efficiency of current operations, Army officials should be able to achieve considerable cost savings in Europe without a major change in the assignment policy.

It is difficult to quantify the toll that unaccompanied assignments in Europe might take on what Army officials believe is fairly high morale and, perhaps more importantly, on future retention rates. Making unaccompanied assignments in Europe voluntary might attract larger numbers of single soldiers, thereby changing the complexion of the force but perhaps taking less a toll on morale. These impacts, however, are difficult to predict. The intangible benefits of retaining a family-oriented assignment policy on U.S. relations with its NATO allies are also difficult to assess. Officials in Europe noted that moving to unaccompanied assignments in and of itself might not signal a reduced U.S. commitment to NATO. However, in our opinion, this action in combination with the dramatic downsizing that is taking place and U.S. actions to reduce its financial support for NATO infrastructure projects might collectively send this signal.

Summaries of Past Army Rotation Programs

The Army has implemented several unit rotation programs in the past to meet mission requirements, reinforce existing forces, and replace casualties in a wartime scenario. Although the objectives were specific, they were not fully achieved and the programs were canceled. A brief summary of some of these programs, their objectives, and their results follows.

GYROSCOPE

GYROSCOPE was a 36-month rotation program (from 1955 to 1959) and it was intended to increase morale, increase combat effectiveness, and reduce support facility costs. Dependents accompanied the soldiers whenever possible. The program was canceled in September 1959 after several exchanges of units, primarily with Europe, indicated that the expected benefits would not be realized. GYROSCOPE units experienced reduced readiness at arrival as they underwent a period of orientation and adjustment; at mid-term when replacement personnel were received; and during the 33rd month due to mandatory reassignments, preparation and departure of the advance party, and the necessary preparation for their departure. Overall, there was an improvement in morale, but no reduction in support costs or dependent expenditures were achieved.

Overseas Unit Replacement Plan

The Overseas Unit Replacement Plan, which was from 1961 to 1962, was designed to take full advantage of the 2-year duty tours of selective service personnel. The first year was devoted to training and preparation and the second year of service would be spent in Korea. The entire time would be spent with the same unit. Program objectives were to reduce personnel turbulence and transportation costs and promote morale and esprit through sustained identification with a particular unit. The program was partially successful in meeting one of its objectives, the enhancement of morale and esprit through association with single unit. However, it revealed that implementation was expensive in personnel, equipment, and facilities and that it had an adverse impact on the Army's Strategic Forces. The program was canceled due to overriding requirements for the buildup of units to support the U.S. Army, Europe (USAREUR).

LONG THRUST

LONG THRUST was designed to test the strategic mobility of the ground forces, exercise the equipment that was being prepositioned for two divisions, and provide a temporary two-battle group augmentation for USAREUR. The program called for three battle groups to be air lifted from the United States to Europe, obtain equipment in Europe, and move to the

training area for a 5-day exercise. After the exercise, one battle group returned its equipment and redeployed to the United States, one battle group replaced an augmentation battle group in Berlin, and the third battle group moved to a temporary station and conducted normal training. There were seven additional exercises conducted in this manner. Units engaged in these exercises reduced the amount of time required to draw prepositioned equipment from 10 days to 2 days. The program, which began in 1961, was terminated in 1964 due to excessive costs and reduced unit readiness.

ROTAPLAN

ROTAPLAN was implemented to reduce the outflow of gold from the United States and the number of dependents living overseas. ROTAPLAN, which began in 1962, provided for soldiers and their families from three battle groups to redeploy from Europe, to be replaced by three battle groups from the United States without dependents. The battle groups were scheduled to serve 6 months in Europe, then be replaced by similar units from the United States. After two successive rotations, ROTAPLAN was canceled on August 3, 1963, for two reasons. First, the execution of the plan concurrent with LONG THRUST led to excessive personnel turbulence and unacceptable downgrading of readiness among the supporting units. Second, it failed to reduce the outflow of gold because noncommand-sponsored dependents followed the soldiers to Europe and unaccompanied personnel spent a higher percentage of their income on the local economy than did accompanied personnel.

Brigade 75/Brigade 76

This concept consisted of unit rotations of 6-month unaccompanied temporary duty tours for ground combat units. However, normal permanent change of station rotations was used for Brigade Headquarters and the Support Battalion, which received replacements from the existing individual replacement system.

The program began in 1975, and it was the Army's determination to increase its combat capability in Europe in the face of the growing Soviet ground threat and through conversion to combat spaces as defined by the Nunn Amendment to save the 12,000 combat service support spaces in Europe it otherwise would have lost by June 30, 1976.

Nine deployments of Brigade 75 and two by Brigade 76 were accomplished with no major problems reported by the unit commanders. The program

was terminated in February 1979 due to the excessive strain that was felt by the nondeploying units that supplied the deployable personnel.

Cohesion, Operational Readiness, and Training

The Cohesion, Operational Readiness, and Training (COHORT) program was initiated in 1981 to stabilize rapid personnel turnover and to enhance cohesion by keeping soldiers together for 3 years through initial entry training, stateside assignment, and initial overseas tours. Units that were designated COHORT would dissolve at the end of the 3-year cycle. The COHORT program was implemented in both Europe and Korea to replace other units at these locations.

COHORT units rotated to Europe after training in the United States for a period of 18 months and then deployed to Europe for the remaining 18 months of the unit. After the 18 months, soldiers that rotated without their dependents redeployed back to the United States for reassignment or separation from the service. Married soldiers who were accompanied by their dependents had to be reassigned to Army units in Europe for an additional 18 months to satisfy their foreign service tour requirement as prescribed in Army Regulation 614-30. The program was terminated in 1991 because, as COHORT rotations increased, USAREUR had difficulty absorbing the overflow of soldiers that needed to be reassigned within Europe.

COHORT units that rotated to Korea operated differently than those going to Europe. The units trained for 2 years in the continental United States or Hawaii and deployed to Korea for the final 12 months of the assignment. Since Korea is a 12-month unaccompanied tour, units redeployed to the United States and disbanded. Thus, the problem of absorbing personnel to serve a foreign service requirement did not affect the units rotating to Korea. The COHORT program to Korea was canceled in 1990 because of the lack of like units to replace the COHORT units because of the force structure reduction and the Desert Shield/ Desert Storm crisis.

Although the COHORT rotations to Europe and Korea have been terminated, they did accomplish the desired objectives of increasing combat readiness and improving unit cohesion. The Army did not cancel the entire program but did consolidate it into three full light infantry divisions—the 7th, 10th, and 25th. These divisions operate under the sustained COHORT model through a package replacement system as opposed to the traditional COHORT model used for pass units, whereby a unit was formed for a period

of 3 years and then disbanded. In addition, these three divisions will not rotate to overseas locations as did former COHORT units.

Multinational Force and Observers-1982 to Present

The Multinational Force and Observers was established in 1981 by the Protocol to the Egypt-Israel Peace Treaty of 1979. The Force is comprised of personnel from 11 nations. The United States contributes personnel to three elements of the force: the U.S. Infantry Battalion Task Force, the Logistic Support Unit, and the Force Commander's Staff. Units supporting the task force rotate to the Sinai region every 6 months and are selected from the 82nd Airborne Division, the 101st Airborne Division (Air Assault), the 9th Motorized Division, and the 7th Infantry Division (Light). The other U.S. elements serve a 1-year tour. All assignments are unaccompanied.

Major Contributors to This Report

National Security and
International Affairs
Division, Washington,
D.C.

Carol R. Schuster, Assistant Director
Robert Pelletier, Assistant Director
Jack L. Kriethe, Evaluator-in-Charge
Delores A. Cohen, Senior Evaluator
Lisa D. Miller, Evaluator

Far East Office
Honolulu, Hawaii

Reginald L. Furr, Jr., Assignment Manager
James L. Morrison, Senior Evaluator
Jeffery D. Malcolm, Evaluator

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

**U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20884-6015**

or visit:

**Room 1000
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC**

**Orders may also be placed by calling (202) 512-6000
or by using fax number (301) 258-4066.**

**United States
General Accounting Office
Washington, D.C. 20548**

**Official Business
Penalty for Private Use \$300**

**First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100**